

REMARKS

Reconsideration of the issues raised in the above referenced Office Action is respectfully solicited.

There is no indication that the formal drawings filed November 19, 2003 have been approved. Applicants respectively request approval of the formal drawings with the next Office Action.

The specification has been amended to address minor informalities therein and the Abstract has been amended to conform to U.S. format. Applicants respectfully request approval of the amendments to the specification and Abstract.

Applicants are unclear as to the basis for not considering the Information Disclosure Statement filed with the application. The Office Action states that the Information Disclosure Statement was not considered because it fails to provide a translation of a foreign document. There is, however, a description of the listed prior art reference JP Patent Publication No. 2002-104303 (JP '303) at page 2, the first and second paragraphs of Applicants' specification. Furthermore, an English translation of the JP '303 Abstract was provided with the Information Disclosure Statement.

37 CFR § 1.98(a)(3)(1) discusses the requirements of non-English language documents submitted with an Information Disclosure Statement. 37 CFR §1.98(a)(3)(i) requires a concise explanation of the relevance of a non-English document. A concise explanation is provided in Applicants' specification as discussed above. Further, 37 CFR §1.98(a)(3)(ii) requires "a copy of the translation if a written English-language translation of a non-English-language document, or portion thereof, is within the possession, custody or control of, or is readily available to any individual designated in section 1.56(c)". Thus, the submitted English Abstract for JP '303 was provided with the Information Disclosure Statement as required.

MPEP §609 III (A)(3) at page 600-122 requires a concise explanation of relevance for non-English language information.

Once again, there is no requirement to provide an entire complete translation with an Information Disclosure Statement.

Applicants believe all of the requirements for consideration of JP '303 have been fully met by the discussion of JP '303 in Applicants' specification and the English abstract provided with the Information Disclosure Statement filed November 19, 2003. Therefore, review and initialing of Form PTO-1449 is respectfully requested.

The amendments to the claims address informalities therein and remove the term "means" from the claims. Approval of the amendments to Claims 1-8 is respectfully requested.

The rejection of Claims 1-8 under 35 USC §102(b) as being anticipated by Graffin, U.S. Patent No. 5 515 888 has been considered.

Graffin discloses a method for filling a receptacle carried by a weighing member, for example on a rotary platform or carousel, that includes the steps of controlling the flow of substance by a filler member, measuring over successive time intervals the instantaneous flow substance into the receptacle, calculating the total weight of substance filled into the receptacle on the basis of the flow rate over each time interval, and causing the flow of substance to stop when the calculated total weight reaches the reference net weight minus a tail-back weight for the substance.

Column 4, lines 31-36 of Graffin discloses that the tail-back weight is equal to the weight of the volume of substance that extends between the filler member and the surface of substance in the receptacle at the moment the flow is stopped. Column 4, lines 36-53 of Graffin discloses calculating the tail-back weight or, when these values are irregular, to measure the tail-back weight and to update it for each filling cycle. Column 4, lines 43-47 further discusses calculating the real net weight by subtracting the weight of the receptacle from the total weight measured by the weighing member. The weight of the receptacle has previously been stored if it is sufficiently constant, or else by measuring

the weight of the empty receptacle prior to filling and then subtracting this measured weight continuously during filling. A comparator member 15 compares the real net weight with the reference net weight 10 to deduce the tail-back weight.

Figure 2 of Graffin shows a plurality of filling stages for each filling cycle wherein the flow rate is at a low level during a beginning portion of the filling cycle, at a higher level during a middle portion of the filling cycle and then returns to a lower level during an end portion of the filling cycle.

Applicants invention is directed to a rotary weight filler including a plurality of filling devices. As shown in Applicants' Figure 1, a vessel is conveyed onto the rotary weight filler 8 and the vessel stabilizes in zone AB during rotation thereof. In zone BC the load cell receiving the vessel thereon stabilizes and in zone CD tare is measured for the vessel. Afterward, in a first operating mode a filling operation DE occurs and then the receptacle is removed and sent to a delivery conveyor 12. During the first mode of operation, each receptacle is weighed during the time period CD. After a certain number of measurements of the tare of vessels being transferred to the rotary weight filler, a set value of the tare is calculated. Then during a second operating mode the tare of each vessel is considered to be the calculated value and no measurement occurs. Thus, during the second operating mode the filling operation is initiated at a point upstream of the point where the filling operation is initiated during the first operational mode. Therefore, as illustrated in Applicants' Figure 1, the filling operation can begin at point C during the rotation of the revolving body, rather than at point D. This advantage is arrived at from utilizing the calculated value for the tare of the receptacle determined during the first operational mode. Finally, the rotary weight filler 8 automatically transfers between the first operational mode and the second operational mode selectively, without a need for operator intervention.

Applicants' Claim 1 recites that "operation is selectively changed between a first operational mode where a filling operation takes place after measuring the tare of the vessel and a second operational mode where a filling operation takes place without measuring the tare of a vessel". Further, Applicants' Claim 1 recites that during the second operational mode "the filling operation is initiated at a point upstream of a point where the filling operation is initiated during the first operational mode". Thus, the filling operation begins earlier in the second mode than in the first operational mode that requires weighing of the vessel. Therefore, the time interval for initiating a filling operation is different for the first and second claimed operating modes. Graffin does not disclose this arrangement.

Graffin does disclose a rotary weight filler that utilizes a stored value for the weight of the receptacle if it is sufficiently constant. Otherwise the weight of the empty receptacle is measured prior to filling. There is, however, no indication of selectively changing between a mode where the weight of the receptacle is measured and a mode where a value of the weight of the receptacle is calculated. Column 4, lines 43-45 of Graffin merely indicate that the weight of the receptacle has previously been stored if it is sufficiently constant. Thus, it is unclear in Graffin when or how a determination is made as to the weight of the receptacle being sufficiently constant. Such measurement may occur before receptacles are even received by the rotary platform and the results may be entered manually. Further, there is no teaching or indication in Graffin of first and second selective operating modes wherein the weight of the receptacles during a first operating mode is calculated to provide a value for a weight of the receptacles during a second operating mode.

Further, there is no indication in Graffin of the filling operation having a predetermined different time for initiating filling of the respective receptacles in different modes.

Further, Applicants' Claim 2 specifically recites "a reference value calculated from the measured tare" as representing the tare of the vessel for the filling operation during the second operational mode. Further, Claim 2 specifically recites that "the filler is again operated in the first operational mode to recalculate the reference value for the tare". There is no indication in Graffin of given time intervals for a first operational mode and a second operational mode, much less wherein the first operational mode recalculates a reference value for the tare.

Further, Applicants' dependent Claims 3-5 recite that the reference value is a "mean value", "one of the measured values which appears with a highest frequency" and "a median value in a queue of measured values arranged in an ascending or descending order", respectively. Graffin merely discloses storing a weight for the receptacle if it is sufficiently constant. Thus Applicants' Claims 3-5 calculate reference values without regard to the weights of the receptacles being sufficiently constant.

Applicants' Claims 6-8 include other features that further distinguish Graffin.

For the above reasons, reconsideration and allowance of amended Claims 1-8 is respectfully requested.

Claims 9-14 have been added. Independent Claim 9 more specifically recites that a first time period corresponds to "the sum of 1) a vessel stabilization time zone needed for a vessel to stabilize after placement onto the weight measuring device, 2) a load cell stabilization time zone needed for a weight measuring device to stabilize after placement of a vessel thereon, and 3) a tare measuring time zone required for completing measurement of the weight of a vessel".

Claim 9 further recites "a second operating mode to open the corresponding said filling valve after a second predetermined time that corresponds to the sum of 1) the vessel stabilization time zone and 2) the load cell stabilization time zone". Thus, in the second mode, operation

of the filling device clearly begins at a specific time, earlier than the "first predetermined time" in the first operating mode. This specific apparatus is not disclosed in Graffin. Further, Claims 10-14 include other features that distinguish Graffin. Therefore Claim 9, and Claims 10-14 dependent therefrom, distinguish Graffin.

Further and favorable reconsideration is respectfully solicited.

Respectfully submitted,



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ABSTRACT OF THE DISCLOSURE

A plurality of vessel receptacles~~16~~ and load cells~~18~~ are mounted along the outer periphery of a revolving body~~14~~ at an equal circumferential spacing. ~~Filling means 24A~~ filling device is disposed above each of the vessel receptacles~~16~~. ~~For an operation in~~In a first operational mode for filling the receptacles, the tare of ~~a vessel 4~~each vessel which is supplied ~~from the outside~~ onto one of the vessel ~~receptacle 16~~receptacles is measured and such data is fed to a controller~~20~~ which determines and stores a mean value of measured tares ~~and store it~~. Subsequently, the operation is switched to a second operational mode for ~~purpose of~~ a filling operation. In the second operational mode, no measurement of the tare is made, and the mean value is regarded as representing the tare of supplied vessels for ~~purpose~~purposes of a filling operation. After a given time interval or after a given number of vessels have been filled, the operation is again switched to the first operational mode where the mean value is again measured. If the new mean value is different from the previous mean value, the stored mean value is rewritten. ~~The present invention allows~~By using the stored value, the filling operation ~~to be~~is initiated at an earlier ~~timing~~time than when the tare is measured.